



EPA

Grey Eagle Mine

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION 9 • SAN FRANCISCO, CA • SEPTEMBER 1998

U.S. EPA To Conduct Removal Action

The U.S. Environmental Protection Agency's (EPA) Emergency Response Office will conduct a removal action to minimize the continued off-site movement of mine tailings from the Grey Eagle Mine Site mill/tailings pond into Indian Creek 5.5 miles upstream from the Klamath River.

The site occupies portions of a 20 acre site on Indian Creek Road., 5.5 miles north of Happy Camp, Siskiyou County, CA. The site was previously used as a copper mine mill tailings dump, and subsequently as a lumber mill. The site is located on the banks of Indian Creek, a tributary of the Klamath River. Indian Creek is habitat for numerous wildlife species, in particular the coho salmon, chinook salmon, and steelhead trout. The steelhead and coho salmon are endangered species. The mill tailings on-site are the result of copper mine operations at the Grey Eagle Mine, approximately two miles from the tailings location. The tailings were slurried downhill from the ore processing facilities to the edge of Indian Creek where they remain. The

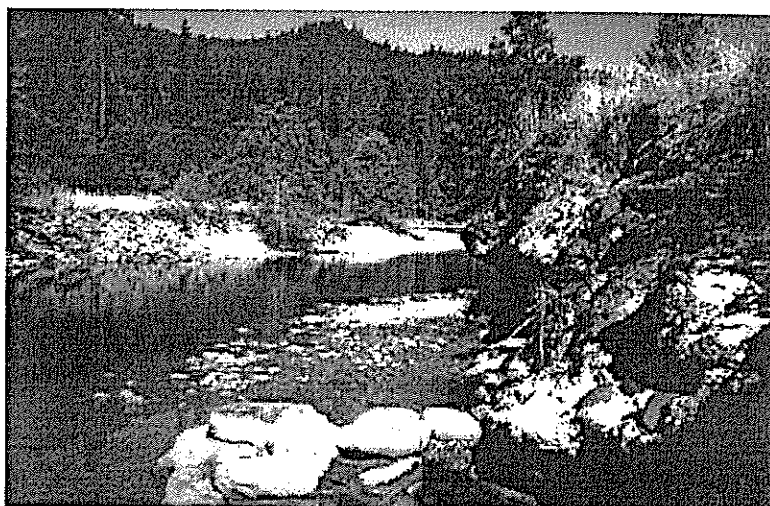
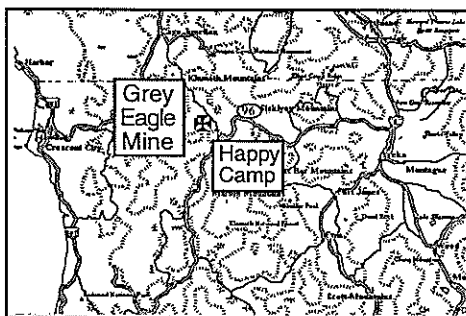
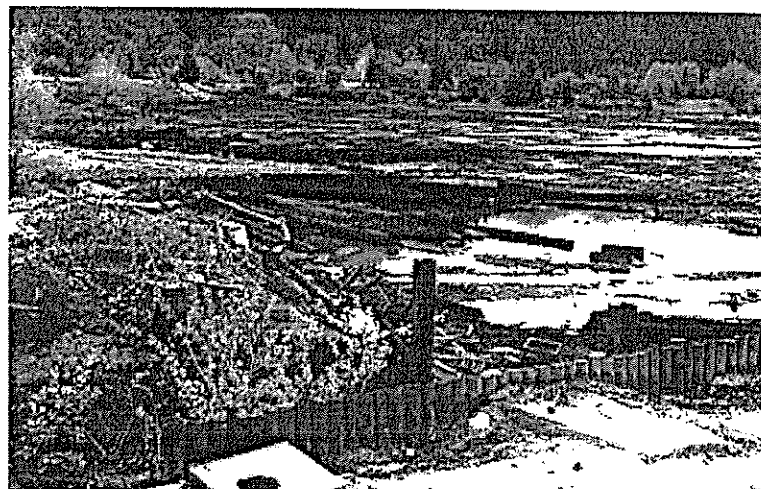


Figure 1:
Turbid
conditions
caused by
seepage
of metal-
rich waters
into Indian
Creek

Figure 2:
The photo
shows the
mill pond
area from
the con-
crete pad
looking east,
during the
rainy
season.
Note the
standing
water.



copper mine last operated during World War II. The lumber mill operated into the 1980s, and its operator was responsible for regrading the mill tailings into a log pond.

The tailings pile occupies the southern portion of the property, as well as a small corner of U.S. Forest Service land at the northwest corner of the site. The tailings

pile is about 1,000 feet long, or about three football fields, in the east-west direction, and approximately 400-500 feet long in the north-south direction. The pile is at least 20-25 feet deep across most of the area and contains an estimated 475,000 cubic yards of sulfide-rich material. When this material is exposed to

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Happy Camp Public Question and Answer Session

On Thursday, September 17 from 4:00 p.m. to 7:00 p.m. members of the EPA project team will be available at the Karuk Tribe's Multi-Purpose Room at the Old Elementary School, 2nd Avenue in Happy Camp to answer your questions and provide additional information about the removal action at the Grey Eagle Mine Site mill/tailings pond.

air and moisture, it breaks down and produces sulfuric acid. The acid dissolves the heavy metals in the tailings which then flow to Indian Creek. Because the tailings pile is so large, it will continue to be a source of acidic water and heavy metals for many years unless action is taken. EPA's removal action will reduce the amount of oxygen and water reaching the tailings pile, thereby reducing the chemical reactions that cause the formation of the acid and heavy metals contamination which have been reaching Indian Creek.

Analysis of samples taken from the site identified high concentrations of arsenic, iron, copper and zinc in the mill/tailings pond and on the edges of the pond.

Arsenic was present at the outer edges of the mill pond. Sulfuric acid and heavy

metals are leaching from the mill/tailings pond at the site. This chemical weathering process is called acid rock drainage, causing an orange/reddish stain in the area, and posing a threat to people, wildlife, and the fishery of Indian Creek. This response is limited to addressing short-term immediate threats at the site.

EPA's contractors will complete the following tasks:

- Reduce the slopes and reshape the tailings pile to minimize erosion;
- Cover the tailings pile with a thick plastic liner to prevent oxygen and rainwater from reaching and infiltrating down into the sulfide-rich tailings;
- Cover the plastic layer with a clean soil cover; and
- Seed native plants on top of the soil

layer to further stabilize the pile and protect the plastic liner.

All work related to this removal action will take place at the site. The work at the site is scheduled to begin on September 21, 1998 and will take approximately two to three months to complete, depending on weather. Approximately 1,200 truckloads of soil will have to be brought to the site to cover the plastic liner, and trucks will use Indian Creek Road to deliver the soil to the site. Crews will usually work all daylight hours, including weekends.

Future Activities

EPA is working to identify previous owners and operators of the Grey Eagle Mine Site Mill/Tailings Pond to determine if they may have any responsibility with respect to the tailings pile and this removal action.

Although EPA is now the lead agency at the site, other federal, state, local and tribal agencies are working with EPA to plan for the removal action. These agencies include the Karuk Tribe of California, the U.S. Forest Service, the U.S. Fish and Wildlife Service, the North Coast California Regional Water Quality Control Board, the California Department of Fish and Game, and the Siskiyou County Department of Environmental Health. ■

Site Background

The Grey Eagle Mine is located about two miles north of the mill/tailings pond site. Exploration and mining of sulfide copper ores began at the mine site in 1895. Through the early part of this century, several operators continued mining at the site. From 1941 to 1945, the Grey Eagle Copper Mining Company (a subsidiary of Newmont Mining Company) operated a deep-tunnel copper mine at the site. The copper ore was milled at the mine site, and the tailings were pumped to the pond site at the mouth of Luther Gulch, along Indian Creek (where the EPA removal action will take place). Along with copper, by-products of gold and silver were also extracted from the material remaining from the copper millings. From 1981 to 1986, the Noranda Mining Company reopened the Grey Eagle Mine (operating it as the Grey Eagle Mine) and extracted gold and silver. Currently, there is no activity taking place at the mine site.

FOR MORE INFORMATION

If you are unable to attend the information session on September 17, and have questions about EPA's work at the site, please contact:

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...or you may call (toll-free) 800-231-3075 and leave a message and your call will be returned.